

4.0 Work Breakdown Structure (WBS) Dictionary

This section contains an abbreviated WBS dictionary, comprised of Part I, the index, and Part II, the dictionary. It has been prepared in accordance with the requirements of the RFP, and follows the general format prescribed in MIL-Handbook-881-1998. The index includes all of the elements contained in RFP Section 00800, Attachment 4, covering the entire contractual scope of work to be performed at both Ft. Greely and at Eareckson Air Station on Shemya Island. The index has been annotated to cross-reference both contract line item numbers (CLINs) and RFP sections defining the scope of work. Part II, the dictionary, provides a written description of the scope to be performed in each WBS element by physical category, as described in RFP Section 00800, Attachment 5.

The WBS is an essential element in our EVMS that integrates planning and scheduling over the life of the project. Coupled with our organizational breakdown structure (OBS), the WBS covers the complete scope of services to be executed and the Missile Defense Constructors (MDC) organizational elements responsible for the performance of those services. The work is organized into logical groupings for budgeting, task planning, cost accounting, and reporting. In addition, the WBS provides flexibility to accommodate change, including the ability to add, delete, and modify work plans resulting from revised requirements such as changes in technical scope or schedule. Changes in requirements are handled by simply revising the WBS index numbering and dictionary definitions. This structure also simplifies the size and complexity of charge numbers in the cost-collection system, thereby reducing integrated master schedule (IMS) and accounting-related costs. Through the WBS coding conventions, cost planning and scheduling can be integrated at a control account level appropriate for analysis and management reporting. Control and maintenance of the WBS and OBS reside in the Project Controls department, which coordinates with accounting personnel to ensure that the cost-collection system code verification tables are always current. The current WBS and OBS coding structures will be available on-line to the USACE and all MDC team personnel.



Part II - WBS Dictionary

BALLISTIC MISSILE DEFENSE SYSTEM TEST BED WBS DICTIONARY

READINESS AND CONTROL WBS 3.03.1.1.2 (TEST PRIMARY FACILITIES)

The Readiness and Control facility is a one-story structure with small vestibules and/or wind shelters at the three exterior personnel entrances. It provides spaces for site security operations, readiness operations and communications, training, personnel support areas, and mechanical and electrical equipment. The total building area is approximately 23,439 square feet. Approximately one-half of the building is High-Altitude Electromagnetic Pulse (HEMP) protected. The entire facility is designed to be accessible to physically disabled persons.

persons.	
WBS Element/Activity/ Task	Description
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B Superstructure	Furnish and install all structural steel, base plates and anchor bolts.
C. Exterior Closure	Furnish and install the exterior concrete composite wall panels, doors and hardware, pipe bollard at the overhead doors.
D. Roofing	Furnish and install the entire roofing system, including the roof coverings, insulation and flashings and trim.
E. Interior Construction	Furnish and install fixed partitions, interior windows, standard interior doors, compartments and cubicles, toilet and bath accessories, identifying devices, lockers, fire extinguisher cabinets, counters, sliding and folding doors, overhead doors, tile and terrazzo wall finishes, painting and wall covering, tile floor finishes, resilient flooring, carpet flooring, access flooring, gypsum wallboard ceiling finish, acoustical ceiling tiles and panel; paint and stain ceilings; and provide prefinished ceiling panels, drinking fountains and coolers.
F. Plumbing	Furnish and install pipe and fittings, valves and hydrants, domestic water supply equipment, insulation, water pipe and fittings, vent pipe and fittings, floor drains, and non-potable water system.
G. HVAC (Mechanical)	Furnish and install the HVAC system, including air distribution, cooling, hangers for ductwork, hot water distribution system, chilled water distribution system, exhaust system, unit heaters, fin tube radiation and computer room air cooling unit.
H. Fire Protection Systems	Design and install an automatic fire detection and alarm system. Provide two fire alarm control panels. One fire alarm control panel is located outside of the HEMP enclosure and one is located inside the HEMP enclosure. The building requires a wet pipe and dry pipe sprinkler system along with a fire detection and alarm system. Fire detection systems include control, notification, air sampling and protection, interlocks with HVAC systems, interface with control and monitoring system and security alarms.
I. Electrical	Provide and install complete power distribution system including, lighting, outlets, branch wiring, fire alarm system, communication systems, fiber optic data transmission system, grounding, lightning protection system, UPS systems and access to the site monitoring and control system.
J. Special Construction (HEMP Shielding)	Fabricate, install and test the HEMP shield plate, including all features and accessories. Testing also includes the EMP shielding.
K. Other Costs	None



MISSILE ASSEMBLY BUILDING WBS 3.03.1.1.3 (TEST PRIMARY FACILITIES)

The Missile Assembly Building is a one-story structure with wind shelters at the exterior personnel entrances. It provides spaces for assembly of missile stages, personnel support spaces for the assembly operation, and mechanical and electrical equipment spaces. The total building area is approximately 13,392 square feet. The process areas include the High Bay Area where the missile assembly work is performed. The facility is not designed to be accessible to physically disabled persons

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A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Furnish and install all structural steel framing and miscellaneous steel. Includes crane runway members.
C. Exterior Closure	Furnish and install the exterior concrete composite wall panels, insulated metal wall panels, doors and hardware, and pipe bollard at the overhead doors.
D. Roofing	Furnish and install the entire roofing system, including the standing seam metal roof panels, flashing and fasteners.
E. Interior Construction	Supply and install fixed partitions, interior windows, standard interior doors, toilet and bath accessories, identifying devices, fire extinguisher cabinets, overhead doors, tile and terrazzo wall finishes, painting and wall covering, tile floor finishes, gypsum wallboard ceiling finish, acoustical ceiling tiles and panel and one 40-ton bridge crane; paint and stain ceilings.
F. Plumbing	Includes below-slab plumbing with blockouts in the risers and WBC penetrations in the upper portion of the floor slab. At each phase, the plumbing will be leak tested, flushed and disinfected. Also includes compressed air piping, water heaters, plumbing fixtures, piping and fittings for potable hot/cold water service and low-temperature heating water system.
G. HVAC (Mechanical)	Furnish and install the HVAC and associated ducting and piping. Includes fabrication of the air supply, distribution, ventilation and exhaust system.
H. Fire	Design and install fire detection and alarm system.
Protection Systems	
I. Electrical	Install power distribution systems. Included is power distribution, grounding system, lightning protection system, fire alarm system, conduit fittings, P A system, communication system and security system.
J. Special Construction (Shielding)	None

INTERCEPTOR STORAGE FACILITIES WBS 3.03.1.1.4 (TEST PRIMARY FACILITIES)

There are three Interceptor Storage (IS) facilities included in the Test Bed construction. These facilities are rectangular earth-covered, blast-resistant, arched concrete structures. The facilities have an earth-covered vestibule/electrical room adjacent to the Interceptor Storage area. They contain adequate space to receive and roll-transfer vehicles into the carriage rail assemblies and to roll-transfer interceptors onto the transport vehicles, as well as providing for interface for interceptor monitoring equipment, housing for roll-transfer equipment, environmental conditions for long-term storage and protective cover during the missile loading and unloading operations. This facility is not designed to be accessible to physically disabled persons.

A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Furnish and install roof slab formwork, grade beams, structural steel framing, walls, doors, concrete, finishing, caulking and sealants.



BALLISTIC MISSILE DEFENSE SYSTEM TEST BED WBS DICTIONARY	
C. Exterior Closure	Place concrete walls; excavate trench; and furnish and install rolling doors, sand fill sides, roof drainage system and the roof deck insulation of extruded polystyrene R-19.
D. Roofing	Included in Exterior Closure, above
E. Interior Construction	Included above
F. Plumbing	Furnish and install the potable water distribution system through the utilidor system. Toilets are not provided for the IS structure.
G. HVAC (Mechanical)	Furnish and install the HVAC system to include the HVAC controls, ventilation air, noise suppression and environmental monitoring.
H. Fire Protection Systems	None
I. Electrical	Provide the interior and exterior power distribution system, panel boards, transformer, both interior and exterior lighting, grounding, lightning protection, the communications systems and interfaces with the site control and monitoring system.
J. Special Construction	Not applicable
K. Other Costs	None
EKV ASSEMBLY	AND CHECKOUT FACILITY WBS 3.03.1.1.6 (TEST PRIMARY FACILITIES)
spaces for installation	d Checkout Facility is a one-story structure with wind shelters at the exterior personnel entrances. It provides of fuel and oxidizer tanks in the EKV, vessel pressurization, storage of materials, personnel support spaces and cal rooms. The total building area is approximately 11,541 square feet. The facility is not designed to be y disabled persons.
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Fabricate and erect structural steel and roof joists. Accessories include fittings, end supports and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Fabricate and install miscellaneous metal items, access doors and panels, expansion and seismic joint covers, floor grating and frame, handrail, ladders, and surface-mounted floor mats.
C. Exterior Closure	Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install aluminum sandwich doors, tracks, and electrically powered door operator. Includes doors, tracks, hardware, counterbalancing weather stripping and operating mechanisms.
D. Roofing	Furnish, install and test the entire roofing system - the standing seam metal roof panels, fasteners, connectors and roof securement components.
E. Interior Construction	Supply and install fixed partitions, interior windows, standard interior doors, toilet and bath accessories, identifying devices, fire extinguisher, tile and terrazzo wall finishes, painting and wall covering, tile floor finishes, resilient flooring, conductive flooring, ceramic tile, gypsum wallboard ceiling finish, acoustical ceiling tiles and panel and a 5-ton bridge crane; and paint and stain ceilings.
F. Plumbing	Furnish and install the hot-water heating system and the non-potable water system.



BALLISTIC MISSILE DEFENSE SYSTEM TEST BED WBS DICTIONARY		
G. HVAC (Mechanical)	Furnish and install the HVAC system, including air-handling units, condensers, insulation, ducts, fans, humidifier and dehumidifier.	
H. Fire Protection Systems	Design and install fire detection and alarm system. The building requires a wet-pipe and dry-pipe sprinkler system. Provide fire extinguisher cabinets in the finished areas and an underground tank to contain fire sprinkler system water from the receiving/packaging and vessel pressurization rooms.	
I. Electrical	Furnish and install power as required to all interior and exterior systems, including ground system, lightning protection, fiber-optics, security system, control and communications tie-ins.	
J. Special Construction (Shielding)	Not applicable	
K. Other Costs	None	
EKV HYPERGOLI	C FUEL STORAGE FACILITY WBS 3.03.1.2.4 (TEST SUPPORT FACILITIES)	
EKV fuel canisters and	torage Facility is a small one-story structure with a loading dock/wind shelter. It provides spaces for storage of I mechanical and electrical equipment to support the facility. The total building area is approximately 507 square designed to be accessible to physically disabled persons.	
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course; and furnish and place an elevated slab over the blast area, including all walls and footings.	
B. Superstructure	Fabricate and erect structural steel, with accessories including fittings, end supports and bridging. Fabricate and install miscellaneous metal.	
C. Exterior Closure	Furnish and install exterior skin, doors and hardware.	
D. Roofing	Furnish and install the entire roofing system, including coverings, flashing and trim.	
E. Interior Construction	Supply and install identifying devices, fire extinguishers including cabinets, painting and wall coverings, doors and frames; paint and stain ceilings and paint structural steel.	
F. Plumbing	The EKV Fuel Storage Facility has no plumbing.	
G. HVAC (Mechanical)	Furnish and install electrical and electronic control devices for the HVAC system. The control systems are direct digital control (DDC) with monitoring and control at the Readiness and Control facility.	
H. Fire Protection Systems	Design and install fire detection and alarm system. Fire detection systems include control, notification, air sampling, protection, interlocks with HVAC systems, interface with control and monitoring system and security alarms. All site facility controllers are to be looped for notification at all locations.	
I. Electrical	Furnish and install power as required to all interior and exterior systems, including ground system, lightning protection, fiber-optics, control and communications tie-ins.	
J. Special Construction (Shielding)	Not applicable	
K. Other Costs	None	



EKV OXIDIZER STORAGE FACILITY WBS 3.03.1.2.5 (TEST SUPPORT FACILITIES)

The EKV Oxidizer Storage Facility is a small one-story structure with a loading dock/wind shelter. It provides spaces for storage of EKV oxidizer canisters and mechanical and electrical equipment to support the facility. The total building area is approximately 507 square feet. The facility is not designed to be accessible to physically disabled persons and is not provided with air conditioning.

The lacinty is not designed to be decessible to physically disabled persons and is not provided with all containorming.		
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.	
B. Superstructure	Fabricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, end supports and bridging.	
C. Exterior Closure	Furnish and install the exterior skin, doors and hardware.	
D. Roofing	Furnish, install and test the entire roofing system - the standing seam metal roof panels, fasteners, connectors, and roof securement components.	
E. Interior Construction	Supply and install identifying devices, fire extinguishers including cabinets, painting and wall coverings, doors and frames; paint and stain ceilings and paint structural steel.	
F. Plumbing	The EKV Oxidizer Facility has no plumbing.	
G. HVAC (Mechanical)	Furnish and install the HVAC system including louvers, ducts and fan.	
H. Fire Protection Systems	Design and install fire detection and alarm system. Fire detection systems include control, notification, air sampling, protection, interlocks with HVAC systems, interface with control and monitoring system and security alarms. All site facility controllers are to be looped for notification at all locations.	
I. Electrical	Furnish and install power and lighting as required to all interior and exterior systems, including ground system, lightning protection, fiber-optics, control and communications tie-ins.	
J. Special Construction (Shielding)	Not applicable	
K. Other Costs	None	

WATER SUPPLY BUILDING WBS 3.03.1.2.6 (TEST SUPPORT FACILITIES)

The Water Supply Building is a small one-room structure with wind shelters at its exterior overhead door and personnel entrances and a short connecting link to the adjacent Fire Supply Water Tank. It provides spaces for the site water supply wells and well pumps, potable water treatment, storage and distribution system pressurization equipment and fire protection pumps and panels. The total building area is approximately 507 square feet. The facility is not designed to be accessible to physically disabled persons.

A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Fabricate and erect structural steel; furnish and install steel joists.
C. Exterior Closure	Fabricate and install precast concrete exterior panels insulated with metal wall panels, and doors.
D. Roofing	Furnish, install and test the entire roofing system - the standing seam metal roof panels, fasteners, connectors, and roof securement components.



BALLISTIC MISSILE DEFENSE SYSTEM TEST BED	
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E. Interior Construction	Supply and install 10-ton bridge crane, fire extinguishers including cabinets, painting and wall coverings, and finishing floors.
F. Plumbing	Furnish and install the below-slab plumbing with blockouts in the risers. At each phase, the plumbing will be leak tested, flushed and disinfected. Includes compressed air piping, water heaters, plumbing fixtures, piping and fittings for potable hot/cold water service and low-temperature heating water system
G. HVAC (Mechanical)	Furnish and install the HVAC system, and associated ducting and piping. Includes fabrication of the air supply, distribution, ventilation and exhaust system.
H. Fire Protection Systems	Design and install fire detection and alarm system. Fire detection systems include control, notification, air sampling, protection, interlocks with HVAC systems, interface with control and monitoring system and security alarms. All site facility controllers are to be looped for notification at all locations.
I. Electrical	Furnish and install power as required to all interior and exterior systems, including ground system, lightning protection, fiber-optics, control and communications tie-ins.
J. Special Construction (Shielding)	Not applicable
K. Other Costs	None
SUBSTATION WE	3S 3.03.1.2.8 (TEST SUPPORT FACILITIES)
shelters at its two exterevenue metering equi	is of an electrical switchyard and a Substation Control Building. The building is a one-story structure with wind rior personnel entrances. It provides spaces for 12.47 kV distribution switchgear, protective relaying control, and ipment and station service power equipment, including a battery and battery charger. The total building area is quare feet. The facility is not designed to be accessible to physically disabled persons.
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Fabricate and erect structural steel; furnish and install steel joists. Accessories include fittings, end supports and bridging. Fabricate and install miscellaneous metal items, access doors and panels, expansion and seismic joint covers, floor grating and frame, handrail, ladders, and surface-mounted floor mats.
C. Exterior Closure	Furnish and install exterior skin and doors.
D. Roofing	Furnish, install and test the entire roofing system - the standing seam metal roof panels, fasteners, connectors, and roof securement components.
E. Interior Construction	Supply and install fixed partitions, interior windows, standard interior doors, toilet and bath accessories, identifying devices, fire extinguisher, tile and terrazzo wall finishes, painting and wall covering, tile floor finishes, resilient flooring, conductive flooring, ceramic tile, gypsum wallboard ceiling finish, acoustical ceiling tiles and panel and a 5-ton bridge crane; and paint and stain ceilings.
F. Plumbing	Furnish and install one portable emergency eyewash near the battery storage area. Toilets are not provided for this building.

G. HVAC (Mechanical)

Furnish and install supply air louver, exhaust fan, unit heater and associated piping.



BALLISTIC MISSILE DEFENSE SYSTEM TEST BED WBS DICTIONARY		
H. Fire Protection Systems	The Substation has no fire protection water.	
I. Electrical	Furnish and install power as required to all interior and exterior systems, including ground system, lightning protection, fiber-optics, control and communications tie-ins.	
J. Special Construction (Shielding)	Not applicable	
K. Other Costs	None	
UTILITIES BUILDI	NG WBS 3.03.1.2.9 (TEST SUPPORT FACILITIES)	
the building is HEMP p spaces for site heating	divided into areas that are protected with HEMP shielding and those that are not. Approximately 80 percent of protected. The building is a one-story structure with wind shelters at its exterior personnel entrances. It provides water equipment and site electrical distribution equipment. The total building area is approximately 11,328 by is not designed to be accessible to physically disabled persons.	
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.	
B. Superstructure	Fabricate and erect structural steel; furnish and install steel joists. Accessories include fittings, end supports and bridging. Fabricate and install miscellaneous metal items, including access doors and panels, expansion and seismic joint covers, floor grating and frame, handrail, ladders, and surface-mounted floor mats.	
C. Exterior Closure	Fabricate and install precast concrete exterior panels; install all doors, tracks, and hardware.	
D. Roofing	Furnish, install and test the entire roofing system - the standing seam metal roof panels, fasteners, connectors, and roof securement components.	
E. Interior Construction	Supply and install fixed partitions, standard interior doors, identifying devices, painting and wall covering, flooring and floor finishes, ceilings and ceiling finishes.	
F. Plumbing	Furnish and install the heating fuel oil system. Toilets are not provided for this building.	
G. HVAC (Mechanical)	Furnish and install supply air louver, exhaust fan, unit heater and associated piping.	
H. Fire Protection Systems	Furnish and install a fire detection and alarm system and an automatic sprinkler system.	
I. Electrical	Furnish and install power as required to all interior and exterior systems, including ground system, lightning protection, fiber-optics, control and communications tie-ins.	
J. Special Construction (Shielding)	Not applicable	
K. Other Costs	None	



SITE PREPARATION WBS 3.03.1.3.1 (GENERAL SITE CONSTRUCTION)

Existing soils are to be removed within the entire footprint of heated buildings to at least one foot below existing grade and replaced with classified fill. At heated buildings, granular material with less than 12% fines shall be provided to a depth of at least 2 feet below footings and 3 feet below slabs. At unheated buildings and tanks, material containing less than 12% fines shall be provided to a depth of at least 8 feet below finish grade. All fill required below buildings will be classified fill compacted to 80% relative density/95 percent of ASTM D 1557. Construction excavation slopes in native soils are not to exceed 1.5 (H) to 1 (V) for stability. Finished embankment slopes do not exceed 2 (H) to 1 (V).

A. Site Clearing	Skim the tundra vegetation layer just before excavation begins. Remove and dispose of stumps, roots and matted roots. After a sufficient area of vegetation has been removed, peat will then be excavated to top of soil (sand and gravel), and the process will be repeated until the work is complete and accepted.
B. Site Demolition and Relocation	Not applicable
C. Site Earthwork	Excavate and backfill all miscellaneous items not covered elsewhere, i.e., excavation beyond 5 feet outside building lines.
D. Site Cleanup	None
E. Other Site Preparation	None

SITE IMPROVEMENTS/ROADS WBS 3.03.1.3.2 (GENERAL SITE CONSTRUCTION)

Both asphalt-paved and aggregate-surfaced roads are provided. All roads and paved areas are constructed over 2 feet of classified fill. All asphalt paved roads and parking areas consist of a 2-inch asphaltic concrete surface course over a 4-inch aggregate base course over an 8-inch aggregate sub-base.

A. Roadways	Excavate peat soil above the final design elevation. Provide aggregate roads, including bases and shoulders, all panel surfaces, curbs and signs and sidewalks.
B. Parking Lots	Excavate and remove peat soil above the final design elevation. Provide parking at various locations as indicated in the facility sections. Parking stall dimensions are 10 feet wide by 20 feet in length. Provide heater plugs at all parking locations and curbs where needed to protect walks and heater plug stands. Provide aggregate surfaced pads adjacent to selected facilities for the placement of emergency generators furnished by others.
C. Walks, Steps, Ramps and Terraces	Not applicable
D. Site Development	Not applicable
E. Landscaping	Landscaping in terms of trees, shrubs and specimen plantings is not included in this contract. Only selected areas around the Readiness and Control facility will be seeded.
F. Special Construction	Not applicable
G. Other Site Improvements	Not applicable



SITE CIVIL/MECHANICAL UTILITIES WBS 3.03.1.3.3 (GENERAL SITE CONSTRUCTION)

Provide for water and sewer service, including water supply and distribution system, sanitary sewer system, storm sewer system, heating and cooling distribution systems and other civil/mechanical systems as required.

SITE ELECTRICAL UTILITIES WBS 3.03.1.3.4 (GENERAL SITE CONSTRUCTION)

The Test Bed power distribution system will be served from the local commercial utility through the new Substation. Incoming commercial power will be at 138kV over a new transmission line provided and installed by the local commercial utility.

Commercial power will be at 130kV over a fiew transmission line provided and installed by the local commercial dulity.		
A. Substations	Provide switchgear to interface with existing power facilities, transformers and unit substations.	
B. Exterior Electrical Distribution	Provide power distribution system feeders. Install miscellaneous power runs in direct buried PVC conduit ductbank system with earth backfill. Encase ductbanks at all road crossings and routed under areas subject to vehicular traffic in reinforced concrete.	
C. Exterior Lighting	Furnish and install all exterior lighting fixtures which are corrosion-proof, high-pressure sodium HID, equipped with ballasts suitable for arctic conditions; all fence security lighting equipped with monitoring and override features allowing the lights to be controlled by security personnel from the Readiness and Control building; and the grounding system, including ground rods and a buried ground conductor.	
D. Exterior Communication and Alarm	Furnish and install the site communications duct bank, the tactical communications system, the fiber-optic system, the telephone system and the public address/emergency warning system.	
E. Other Electrical Utilities	None	

MOB & DEMOB WBS 3.03.1.3.5 (GENERAL SITE CONSTRUCTION)

This item consists of providing a mobilization plan, including weights and sizes, for shipping of material, tools, personnel and equipment, and developing and implementing a safety action plan. The demob plan is to include total cleanup of facilities to original condition. In addition, the temporary power infrastructure will be developed and installed.

ENTRY CONTROL WBS 3.03.1.4.2 (SECURITY CONSTRUCTION)

The Entry Control is a one-story, L-shaped structure that is composed of two parts. One part is an enclosed but unconditioned drive-through vehicle sally port, the other part is attached to the east side of the sally port and is a guard station that includes both secure and unsecure waiting areas, a toilet and a janitor closet. The total building area is approximately 3,910 square feet. The facility is designed to be accessible to physically disabled persons.

A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Fabricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, end supports and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Fabricate and install miscellaneous metal items, access doors and panels, expansion and seismic joint covers, floor grating and frame, handrail, ladders, and surface-mounted floor mats.
C. Exterior Closure	Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install doors, tracks, and operating mechanisms.
D. Roofing	Furnish, install and test the entire roofing system - the standing seam metal roof panels, fasteners, connectors, and roof securement components.



BALLISTIC MISSILE DEFENSE SYSTEM TEST BED WBS DICTIONARY		
E. Interior Construction	Supply and install fixed partitions, interior windows, standard interior doors, toilet and bath accessories, identifying devices, fire extinguisher, counters, cabinets, tile and terrazzo wall finishes, painting and wall covering, resilient flooring, tile floor finishes, acoustical ceiling tiles and panel; paint and stain ceilings; and provide aluminum siding, drinking fountain and coolers.	
F. Plumbing	Clean and flush sanitary sewer. Clean, flush and pressure-test to identify leaks, and disinfect the domestic hot and cold water piping.	
G. HVAC (Mechanical)	Furnish and install supply air louver, exhaust fan, unit heater and associated piping.	
H. Fire Protection Systems	No fire detection and alarm or fire suppression systems are provided. Semi-recessed fire extinguisher cabinets are provided for this building. The fire extinguishers will be provided by the user.	
I. Electrical	Furnish and install exterior power distribution system, interior power distribution system, motor control centers, panel boards, 480-208Y/120 volt transformers, exterior lighting, interior lighting, emergency/egress lighting, grounding, and lightning protection.	
J. Special Construction (Shielding)	None	
K. Other Costs	None	

PERIMETER FENCING WBS 3.03.1.4.3 (SECURITY CONSTRUCTION)

One perimeter fence encloses the entire Test Bed site except for the IDT, the Substation and the Fuel Unloading Facility. A separate perimeter fence encloses the IDT site. The Substation and the Fuel Unloading Facility are enclosed with fences identical to the perimeter fence except that they do not include the barrier cables. The perimeter fences around the overall site and the IDT site are located a minimum of 240 feet from all facilities.

PROJECT MANAGEMENT WBS 3.03.1.7

This WBS item encompasses all post-planning activities relating to project execution. This includes all non-manual labor and all other costs associated with non-manual labor, including, but not limited to, project management, supply management, safety and environmental health, construction management, quality control, field engineering, subcontract management, property management, project controls, field administration, office supplies and equipment, housing and camp operations expense, business travel expense, and personnel assignment and rotation travel expense.

GOVERNMENT SUPPORT ACTIVITIES WBS 3.03.1.8

This item covers costs associated with supporting the Government's effort on the facilities rather than construction costs. These costs include providing vehicles, computers, computer support system, and a Government construction office at the construction sites.

PLANNING WBS 3.03.1.9

This WBS item involves all activities performed in advance to organize the construction effort, including, but not limited to, notifications such as to the office of Federal Contract Compliance Programs; finalizing the work breakdown structure and the WBS dictionary; establishing and implementing the EVMS; validating long-lead procurement actions; supporting USACE's permit actions; finalizing the Integrated Master Plan and the Integrated Master Schedule; establishing the site office; initiating long-lead procurement actions; and purchasing hardware and software for the integrated computer system.

COMMISSIONING WBS 3.03.1.10

This covers the execution, as required, of the preliminary pre-functional checklists and functional performance tests.

AWARD FEE WBS 3.03.1.11



PASS-THROUGH COST WBS 3.03.1.12

This includes all construction equipment, spare parts, utilities, temporary facilities and consumables. Similarly, all contractor travel and costs associated with the movement, storage, and sale of personal effects, household goods, and vehicles, as allowed by the FAR 31.205-35, are included. General and administrative expenses in accordance with the disclosed cost accounting practices are included. Fee is not applicable to costs in this WBS item.

SITE PREPARATION WBS 3.03.3.1.1 (BMC3 FACILITIES - GENERAL SITE CONSTRUCTION - FT. GREELY)

Site preparation at Ft. Greely includes site clearing and grubbing, earthwork, cleanup and any other general site work.

· ·	
A. Site Clearing	Skim the tundra vegetation layer just before peat excavation begins. Remove and dispose of stumps, roots and matted roots. After a sufficient area of vegetation has been removed, peat will then be excavated to top of soil (sand and gravel), and the process will be repeated until the work is complete and accepted.
B. Site Demolition and Relocation	None
C. Site Earthwork	Includes excavation and backfill for all miscellaneous items not covered elsewhere.
D. Site Cleanup	As required
E. Other Site Preparation	None

SITE IMPROVEMENTS/ROADS WBS 3.03.1.3.2 (BMC³ FACILITIES – GENERAL SITE CONSTRUCTION - FT. GREELY)

Both asphalt-paved and aggregate-surfaced roads are provided. All roads and paved areas are constructed over 2 feet of classified fill. All asphalt paved roads and parking areas consist of a 2-inch asphaltic concrete surface course over a 4-inch aggregate base course over an 8-inch aggregate sub-base.

A. Roadways	Excavate and remove peat soil above the final design elevation. Provide aggregate roads, including bases and shoulders, all paved surfaces, curbs and signs and sidewalks.
B. Parking Lots	Excavate peat soil above the final design elevation. Provide a parking area large enough to accommodate two maintenance vehicles near the IDT building entrance and a parking area large enough to accommodate at least three maintenance vehicles near the entrance to the DSCS facility. Provide a perimeter patrol road 10-feet wide with a 2-foot shoulder on each side on the outside of the perimeter fence.
C. Walks, Steps, Ramps and Terraces	Pedestrian access to the Ft. Greely site is not provided.
D. Site Development	Furnish and install a crash barrier perimeter fence and a security fence complete with gate. Provide and install lights for detection of intruders.
E. Landscaping	Clear the perimeter patrol road and 50 feet outside of the perimeter road of all trees and stumps. Furnish topsoil, seed, fertilizer and mulch to all areas disturbed by construction that are not covered with aggregate surfaces.
F. Special Construction	None
G. Site Improvements	None



MOB & DEMOB WBS 3.03.3.1.3 (BMC3 FACILITIES - GENERAL SITE CONSTRUCTION - FT. GREELY)

This item consists of providing a mobilization plan, including weights and sizes, for shipping of material, tools, personnel and equipment, and developing and implementing a safety action plan. The demob plan is to include total cleanup of facilities to original condition. In addition, the temporary power infrastructure will be developed and installed.

SITE CIVIL/MECHANICAL UTILITIES WBS 3.03.3.2.1 (BMC3 FACILITIES - UTILITIES - FT. GREELY)

This item consists of providing for water and sewer service, including water supply and distribution systems, sanitary sewer system, storm sewer system, heating and cooling distribution systems. and other civil/mechanical systems as required.

SITE ELECTRICAL UTILITIES WBS 3.03.3.2.2 (BMC3 FACILITIES - UTILITIES - FT. GREELY)

This item consists of providing substations, electrical power, grounding, and site communications systems as required.

IDT FACILITIES WBS 3.03.3.5 - (FT. GREELY)

The IDT facility is a one-story, rectangular-shaped structure. The facility provides spaces for communications system equipment, including a dish-type transmitting antenna provided by others, and mechanical and electrical support equipment. The total building area is approximately 3,609 square feet. Approximately 60 percent of the building is HEMP protected. Most of the facility is designed to be accessible to physically disabled persons with the exception that there are 2-½-inch-high thresholds at the HEMP vestibule doors.

accessible to physicall	y disabled persons with the exception that there are 2-½-inch-high thresholds at the HEMP vestibule doors.
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Fabricate and erect structural steel; furnish and install steel joists. Accessories include fittings, end supports and bridging.
C. Exterior Closure	Fabricate and install structural steel members, insulation and vapor barrier.
D. Roofing	Furnish and install the entire roofing system. The roof system is a protected, low-slope, inverted roof membrane system installed over a cast-in-place, 9-inch-thick, reinforced concrete roof slab.
E. Interior Construction	Supply and install HEMP and non-HEMP areas, standard interior doors, gypsum wallboard, acoustical sound absorptive foam wall panels, and paint.
F. Plumbing	Furnish and install the domestic water supply and a roof drain system. This facility has no toilets.
G. HVAC (Mechanical)	Furnish and install the HVAC system, including air louver, exhaust fan, unit heater and associated piping.
H. Fire Protection Systems	Furnish and install three fire extinguishing systems. Design, furnish and install an automatic wet-pipe sprinkler system and a fire detection and alarm system.
I. Electrical	Furnish and install exterior power distribution system, interior power distribution system, a UPS, panel boards, service entrance disconnect switches, transformers, HEMP/EMI filter assemblies, automatic transfer switches, exterior lighting, interior lighting, emergency/egress lighting, HEMP vestibule lighting, grounding, lightning protection, communications systems, and HEMP penetrations.
J. Special Construction (Radome and HEMP shield)	The radome equipment area consists of a first-floor equipment area with pressurized stairway leading to the radome platform. The radome platform is pressurized to the extent site conditions require. Furnish and install HEMP shielding, as applicable.
K. Other Costs	Provide empty conduits, pull wires, and penetrations for all security devices. The security system devices are not included in this contract.



DSCS FACILITY WBS 3.03.3.7 - (FT. GREELY)

The DSCS facility is a one-story structure consisting of an Equipment Protection Building (EPB) and one radome. The facility provides spaces for one GF/GI communications enclosure, maintenance area, supply storage and mechanical and electrical support equipment. The total building area is approximately 5,066 square feet. The facility is designed to be accessible to physically disabled persons.

The total building area	The total building area is approximately 5,000 square reet. The facility is designed to be accessible to physically disabled persons.		
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade. Includes roads and fences.		
B. Superstructure	Fabricate and erect structural steel; furnish and install steel joists. Accessories include fittings, end supports and bridging.		
C. Exterior Closure	Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install pressed steel doors, hardware, weatherstripping and insulation.		
D. Roofing	Furnish and install the entire roofing system.		
E. Interior Construction	Supply and install concrete slab floors with sealer, all interior walls, doors, toilet, ceiling, and painting.		
F. Plumbing	Furnish and install all plumbing, including one handicapped-accessible unisex toilet.		
G. HVAC (Mechanical)	Furnish and install the HVAC system, including supply air louver, exhaust fan, unit heater and associated piping.		
H. Fire Protection Systems	Furnish and install an automatic fire detection and alarm system.		
I. Electrical	Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems.		
J. Special Construction	Provide and install two air-handling units with heating water coils, EMP and pressure doors.		
K. Other Costs	Provide empty conduits, pull wires, and penetrations for all security devices. The security system devices are not included in this contract.		

PROJECT MANAGEMENT WBS 3.03.3.9 - (FT. GREELY)

This item covers project management, supply management, safety and environmental health, construction management, quality control, field engineering, subcontract management, property management, project controls, field administration, office supplies and equipment, housing and camp operations expense, business travel expense, and personnel assignment and rotation travel expense.

GOVERNMENT SUPPORT ACTIVITIES WBS 3.03.3.10 - (FT. GREELY)

This item covers costs associated with supporting the Government's effort on the facilities rather than construction costs. These costs include providing vehicles, computers, computer support system, and a Government construction office at the construction sites.

PLANNING WBS 3.03.3.11 - (FT. GREELY)

This WBS item encompasses all activities performed in advance to organize the construction effort, including, but not limited to, notifications such as to the office of Federal Contract Compliance Programs; finalizing the work breakdown structure and the WBS dictionary; establishing and implementing the EVMS; validating long-lead procurement actions; supporting USACE's permit actions; finalizing the Integrated Master Plan and the Integrated Master Schedule; establishing the site office; initiating long-lead procurement actions; and purchasing hardware and software for the integrated computer system.



COMMISSIONING WBS 3.03.1.12 - (FT. GREELY)

This item covers the execution, as required, of the preliminary pre-functional checklists and functional performance tests.

AWARD FEE WBS 3.03.3.13 - (FT. GREELY)

PASS-THROUGH COST WBS 3.03.3.14 - (FT. GREELY)

This item includes all construction equipment, spare parts, utilities, temporary facilities and consumables. Similarly, all contractor travel and costs associated with the movement, storage, and sale of personal effects, household goods, and vehicles, as allowed by the FAR 31.205-35, are included. General and administrative expenses in accordance with the disclosed cost accounting practices are included. Fee is not applicable to costs in this WBS item.

SITE PREPARATION WBS 3.03.3.1.1 (BMC³ FACILITIES – GENERAL SITE CONSTRUCTION – EARECKSON AIR STATION)

This item covers site clearing and grubbing, earthwork, cleanup and any other general site work.			
A. Site Clearing	Skim the tundra vegetation layer just before peat excavation begins. Remove and dispose of stumps, roots and matted roots. After a sufficient area of vegetation has been removed, peat will then be excavated to top of soil (sand and gravel), and the process will be repeated until the work is complete and accepted.		
B. Site Demolition and Relocation	None		
C. Site Earthwork	Excavate and backfill all miscellaneous items not covered elsewhere.		
D. Site Cleanup	As required		
E. Other Site Preparation	None		
SITE IMPROVEMENTS/ROADS WBS 3.03.1.3.2 (BMC ³ FACILITIES – GENERAL SITE CONSTRUCTION –			

SITE IMPROVEMENTS/ROADS WBS 3.03.1.3.2 (BMC³ FACILITIES – GENERAL SITE CONSTRUCTION – EARECKSON AIR STATION)

A. Roadways	Excavate and remove peat soil above the final design elevation. Provide aggregate roads, including bases and shoulders, all paved surfaces, curbs and signs and sidewalks.
B. Parking Lots	Excavate and remove peat soil above the final design elevation. Provide a parking area large enough to accommodate two maintenance vehicles and a perimeter patrol road 10-feet wide with a 2-foot shoulder on each side on the outside of the perimeter fence.
C. Walks, Steps, Ramps and Terraces	Pedestrian access to the site is not provided.
D. Site Development	Furnish and install a crash barrier perimeter fence and a security fence complete with gate. Provide and install lights for detection of intruders.
E. Landscaping	Clear the perimeter patrol road and 50 feet outside of the perimeter road of all trees and stumps. Furnish topsoil, seed, fertilizer and mulch to all areas disturbed by construction that are not covered with aggregate surfaces.
F. Special Construction	None
G. Site Improvements	None



MOB & DEMOB WBS 3.03.3.1.3 (BMC³ FACILITIES – GENERAL SITE CONSTRUCTION – EARECKSON AIR STATION)

This item consists of providing a mobilization plan, including weights and sizes, for shipping of material, tools, personnel and equipment, and developing and implementing a safety action plan. The demob plan is to include total cleanup of facilities to original condition. In addition, the temporary power infrastructure will developed.

SITE CIVIL/MECHANICAL UTILITIES WBS 3.03.3.2.1 (BMC³ FACILITIES –UTILITIES CONSTRUCTION – EARECKSON AIR STATION)

This item consists of providing water and sewer service, including water supply and distribution system, sanitary sewer system, storm sewer system, heating and cooling distribution systems and other civil/mechanical systems as required.

SITE ELECTRICAL UTILITIES WBS 3.03.3.2.2 (BMC3 FACILITIES - UTILITIES - EARECKSON AIR STATION)

This item consists of providing electrical power, grounding, and site communications as required.

IDT FACILITIES WBS 3.03.3.5 - (EARECKSON AIR STATION)

The IDT facility is a one-story, rectangular-shaped structure. The facility provides spaces for communications system equipment, including a dish-type transmitting antenna provided by others, and mechanical and electrical support equipment. The total building area is approximately 3,609 square feet. Approximately 60 percent of the building is HEMP protected. Most of the facility is designed to be accessible to physically disabled persons with the exception that there are 2-½-inch-high thresholds at the HEMP vestibule doors.

accessible to physically	y disabled persons with the exception that there are 2-72-inch-nigh thresholds at the HeiviP vestibule doors.
A. Substructure	Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade.
B. Superstructure	Fabricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, end supports and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Expansion joints will be felt or similar acceptable material placed around each structural steel post, around the chiller foundations and in slabs between HEMP and non-HEMP areas. Includes contraction joint strips, preformed expansion joint filler, sealant and waterstops.
C. Exterior Closure	Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install aluminum sandwich doors, tracks, and electrically powered door operator. Includes doors, tracks, hardware, counterbalancing weatherstripping and operating mechanisms.
D. Roofing	Furnish and install the entire roofing system; construction is cast-in-place concrete load-bearing walls supporting a cast-in-place roof.
E. Interior Construction	Supply and install HEMP and non-HEMP areas, standard interior doors, gypsum wallboard, acoustical sound absorptive foam wall panels, and paint. This facility has no toilets.
F. Plumbing	Furnish and install a roof drain system.
G. HVAC (Mechanical)	Furnish and install supply air louver, exhaust fan, unit heater and associated piping.
H. Fire Protection Systems	Furnish and install three fire extinguishing systems; design, furnish and install an automatic wet-pipe sprinkler system and a fire detection and alarm system.



service entrance disconnect switches, transformers, HEMP/EMI filter assemblies, automatic transfer switches, exterior lighting, interior lighting, emergency/legress lighting, HEMP vestibule lighting, grounding, lightning protection, communications systems, and HEMP penetrations. None None None None Orbital Construction Shielding) K. Other Costs Provide empty conduits, pull wires, and penetrations for all security devices. The security system devices are not included in this contract. DSCS FACILITY WBS 3.03.3.7 – (EARECKSON AIR STATION) The DSCS facility is located at the Foundation Village site, approximately 2,500 feet southeast of Building 600. It is a one-story structure consisting of an Equipment Protection Building (EPB) and one radome. The facility provides spaces for two GF/GI communications enclosures, two power vans, maintenance area, supply storage and mechanical and electrical support equipment. The total building area is approximately 14,050 square feet. The facility is designed to be accessible to physically disabled persons. A. Substructure Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade: all concrete formwork and reinforcing steet; and placement, curing and weather protection of structural concrete and slab on grade. Also includes aggregate-surfaced roads and a fuel-unloading area northeast of the DSCS facility. There is no fencing at the DSCS. B. Superstructure Expansion joints will be felt or similar acceptable material placed around each structural steel post, around the children or supports and brighting. Furnish and install of the protection place and brighing. Furnish and install representation point strips, performed expansion joint filler, sealant and waterstops. C. Exterior Closure Design, fabricate and install presset concrete exterior panels: furnish and install interior sealant at floor joints, general cautiking, horizontal joints in concrete walk		BALLISTIC MISSILE DEFENSE SYSTEM TEST BED WBS DICTIONARY	
Construction (Shielding) K. Other Costs Provide empty conduits, pull wires, and penetrations for all security devices. The security system devices are not included in this contract. Poscs Facility was 3.03.3.7 – (EARECKSON AIR STATION) The DSCS facility is located at the Foundation Village site, approximately 2,500 feet southeast of Building 600. It is a one-story structure consisting of an Equipment Protection Building (EPB) and one radome. The facility provides spaces for two GF/GI communications anciosures, two power vans, maintenance areas, supply storage and mechanical and electrical support equipment. The total building area is approximately 14,050 square feet. The facility is designed to be accessible to physically disabled persons. A. Substructure Excavate, trench and backfill to a point 5 feet outside the building lines: furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing stelet; and placement, curing and weather protection of structural concrete and slab on grade. Also includes aggregate surfaced roads and a fuel-unloading area northeast of the DSCS facility. There is no fencing at the DSCS. B. Superstructure Expiricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, and supports and bridging. Furnish and install prod deck, including adjusting plates, and complete touch-up painting. Expansion joints will be felt or similar acceptable material placed around each structural steel post, around the chiller foundations and in slabs between HEMP and non-HEMP areas. Includes contraction joint strips, preformed expansion joint filler, sealant and waterstops. C. Exterior Closure Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install pressed steel door, hardware, weatherstripping and install concrete slab floors with sealer, all interi	I. Electrical	service entrance disconnect switches, transformers, HEMP/EMI filter assemblies, automatic transfer switches, exterior lighting, interior lighting, emergency/egress lighting, HEMP vestibule lighting, grounding, lightning	
DSCS FACILITY WBS 3.03.3.7 - (EARECKSON AIR STATION) The DSCS facility is located at the Foundation Village site, approximately 2,500 feet southeast of Building 600. It is a one-story structure consisting of an Equipment Protection Building (EPB) and one radome. The facility provides spaces for two GF/GI communications enclosures, two power vans, maintenance area, supply storage and mechanical and electrical support equipment. The total building area is approximately 14,050 square feet. The facility is designed to be accessible to physically disabled persons. A. Substructure Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel: and placement, curing and weather protection of structural concrete and slab on grade: so include aggregate surfaced roads and a fuel-unloading area northeast of the DSCS facility. There is no fencing at the DSCS. B. Superstructure Fabricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, end supports and bridging. Furnish and install road feek, including adjusting plates, and complete touch-up painting. Expansion joint filler, sealant and waterstops. C. Exterior Closure Design, fabricate and install precast concrete exterior panels: furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements: and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements: and install pressed steel door, hardware, weatherstripping and insulation. D. Roofing Furnish and install the entire roofing system. Supply and install concrete slab floors with sealer, all interior walls, and ceiling: and paint. Construction Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Furnish and install exterior p	J. Special Construction (Shielding)	None	
The DSCS facility is located at the Foundation Village site, approximately 2,500 feet southeast of Building 600. It is a one-story structure consisting of an Equipment Protection Building (EPB) and one radome. The facility provides spaces for two GF/GI communications enclosures, two power vans, maintenance area, supply storage and mechanical and electrical support equipment. The total building area is approximately 14,050 square feet. The facility is designed to be accessible to physically disabled persons. A. Substructure Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade. Also includes aggregate surfaced roads and a fuel-unloading area northeast of the DSCS facility. There is no fencing at the DSCS. B. Superstructure Fabricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, end supports and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Expansion joints will be fell or similar acceptable material placed around each structural steel post, around the chiller foundations and in slabs between HEMP and non-HEMP areas. Includes contraction joint strips, preformed expansion joint filler, sealant and waterstops. D. Exterior Closure Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install pressed steel door, hardware, weatherstripping and insulation. Furnish and install supply air louver, exhaust fan,	K. Other Costs		
consisting of an Equipment Protection Building (EPB) and one radome. The facility provides spaces for two GF/GI communications enclosures, two power vans, maintenance area, supply storage and mechanical and electrical support equipment. The total building area is approximately 14,050 square feet. The facility is designed to be accessible to physically disabled persons. A. Substructure Excavate, trench and backfill to a point 5 feet outside the building lines; furnish, place and compact aggregate base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade. Also includes aggregate surfaced roads and a fuel-unloading area northeast of the DSCS facility. There is no fencing at the DSCS. B. Superstructure Fabricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, end supports and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Expansion joints will be felt or similar acceptable material placed around each structural steel post, around the chiller foundations and in slabs between HEMP and non-HEMP areas. Includes contraction joint strips, preformed expansion joint filler, sealant and waterstops. C. Exterior Closure Exterior Closure Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general cauking, horizontal joints in concrete walks and pavements; and install pressed steel door, hardware, weatherstripping and insulation. D. Roofing Furnish and install the entire roofing system. Supply and install concrete slab floors with sealer, all interior walls, and ceiling; and paint. Construction Furnish and install supply air louver, exhaust fan, unit heater and associated piping. Furnish and install supply air louver, exhaust fan, unit heater and associated piping. Furnish and install exterior power distribution system, in	DSCS FACILITY V	VBS 3.03.3.7 – (EARECKSON AIR STATION)	
base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade. Also includes aggregate-surfaced roads and a fuel-unloading area northeast of the DSCS facility. There is no fencing at the DSCS. B. Superstructure B. Superstructure Fabricate and erect structural steel. Furnish and install steel joists. Accessories include fittings, end supports and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Expansion joints will be felt or similar acceptable material placed around each structural steel post, around the chiller foundations and in slabs between HEMP and non-HEMP areas. Includes contraction joint strips, preformed expansion joint filler, sealant and waterstops. C. Exterior Closure Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install pressed steel door, hardware, weatherstripping and insulation. D. Roofing Furnish and install the entire roofing system. Supply and install concrete slab floors with sealer, all interior walls, and ceiling; and paint. Construction F. Plumbing Furnish and install all plumbing, including the potable water system, the sanitary sewer system, the fuel oil system and one handicapped-accessible unisex toilet consisting of one water closet and one lavatory. G. HVAC Mechanical) H. Fire Protection Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergencylegress lighting, grounding, lightning protection, and communications systems. Provide the GF/GI radome	consisting of an Equipmenclosures, two power	ment Protection Building (EPB) and one radome. The facility provides spaces for two GF/GI communications vans, maintenance area, supply storage and mechanical and electrical support equipment. The total building	
and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Expansion joints will be felt or similar acceptable material placed around each structural steel post, around the chiller foundations and in slabs between HEMP and non-HEMP areas. Includes contraction joint strips, preformed expansion joint filler, sealant and waterstops. C. Exterior Closure Design, fabricate and install precast concrete exterior panels; furnish and install interior sealant at floor joints, general caulking, horizontal joints in concrete walks and pavements; and install pressed steel door, hardware, weatherstripping and insulation. D. Roofing Furnish and install the entire roofing system. Supply and install concrete slab floors with sealer, all interior walls, and ceiling; and paint. Construction Furnish and install all plumbing, including the potable water system, the sanitary sewer system, the fuel oil system and one handicapped-accessible unisex tollet consisting of one water closet and one lavatory. G. HVAC (Mechanical) H. Fire Protection Furnish and install supply air louver, exhaust fan, unit heater and associated piping. Mechanical Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Electrical Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergencylegress lighting, grounding, lightning protection, and communications systems. Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	A. Substructure	base course. Includes all structures below and up to grade; all concrete formwork and reinforcing steel; and placement, curing and weather protection of structural concrete and slab on grade. Also includes aggregate-	
general caulking, horizontal joints in concrete walks and pavements; and install pressed steel door, hardware, weatherstripping and insulation. D. Roofing Furnish and install the entire roofing system. Supply and install concrete slab floors with sealer, all interior walls, and ceiling; and paint. Furnish and install all plumbing, including the potable water system, the sanitary sewer system, the fuel oil system and one handicapped-accessible unisex toilet consisting of one water closet and one lavatory. G. HVAC (Mechanical) H. Fire Protection Systems Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Electrical Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems. Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	B. Superstructure	and bridging. Furnish and install roof deck, including adjusting plates, and complete touch-up painting. Expansion joints will be felt or similar acceptable material placed around each structural steel post, around the chiller foundations and in slabs between HEMP and non-HEMP areas. Includes contraction joint strips,	
Supply and install concrete slab floors with sealer, all interior walls, and ceiling: and paint. F. Plumbing Furnish and install all plumbing, including the potable water system, the sanitary sewer system, the fuel oil system and one handicapped-accessible unisex toilet consisting of one water closet and one lavatory. G. HVAC (Mechanical) Furnish and install supply air louver, exhaust fan, unit heater and associated piping. Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems. Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	C. Exterior Closure	general caulking, horizontal joints in concrete walks and pavements; and install pressed steel door, hardware,	
Furnish and install all plumbing, including the potable water system, the sanitary sewer system, the fuel oil system and one handicapped-accessible unisex toilet consisting of one water closet and one lavatory. G. HVAC (Mechanical) H. Fire Protection Systems Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems. Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	D. Roofing	Furnish and install the entire roofing system.	
system and one handicapped-accessible unisex toilet consisting of one water closet and one lavatory. G. HVAC (Mechanical) H. Fire Protection Systems Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems. Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	E. Interior Construction	Supply and install concrete slab floors with sealer, all interior walls, and ceiling; and paint.	
(Mechanical) H. Fire Protection Systems Furnish and install an automatic fire detection and alarm system. Install an automatic wet-pipe sprinkler system for the entire facility. Electrical Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems. J. Special Construction (Radomes) Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	F. Plumbing		
for the entire facility. Electrical Furnish and install exterior power distribution system, interior power distribution system, motor control center, switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems. Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	G. HVAC (Mechanical)	Furnish and install supply air louver, exhaust fan, unit heater and associated piping.	
switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting, emergency/egress lighting, grounding, lightning protection, and communications systems. J. Special Construction (Radomes) Provide the GF/GI radomes area, except for ventilation systems, chiller systems and electric heating systems, which are provided by others.	H. Fire Protection Systems		
Construction (Radomes) which are provided by others.	I. Electrical	switchboard, transformer, power system metering and monitoring, exterior lighting, interior lighting,	
C. Other Costs Demolish several Foundation Village foundations.	J. Special Construction (Radomes)		
	K. Other Costs	Demolish several Foundation Village foundations.	



BUILDING 600 WBS 3.03.3.8 - (EARECKSON AIR STATION)

Existing Building 600 is a multi-story building of permanent construction. The facility contains spaces for On-Site Support Center (OSSC), a Site Control and Monitoring System (SCMS) area, arms storage and dispensing rooms, guard check-in and security shift leader rooms, an Element Site Communications Node (ESCN) and IDT support space, administrative/technical/engineering support spaces and a Central Security Center (CSC). The total building area is approximately 5,066 square feet. The facility is designed to be accessible to physically disabled persons. No special accessible design features are included in the administrative spaces on the ground floor.

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A. Site Clearing	There is no civil work associated with this renovation.
B. Superstructure	Remove and renovate portions of the existing building interior walls as required.
C. Exterior Closure	Renovate as required.
D. Roofing	Renovate as required.
E. Interior Construction	Renovate as required.
F. Plumbing	Renovate as required.
G. HVAC (Mechanical)	Renovate as required.
H. Fire Protection Systems	The building is equipped with a conventional fire detection and alarm system. Furnish and install additional smoke detectors as required.
I. Electrical	Renovate as required.
J. Special Construction	Demolish as required.

PROJECT MANAGEMENT WBS 3.03.3.9 - (EARECKSON AIR STATION)

This item covers project management, supply management, safety and environmental health, construction management, quality control, field engineering, subcontract management, property management, project controls, field administration, office supplies and equipment, housing and camp operations expense, business travel expense, and personnel assignment and rotation travel expense.

GOVERNMENT SUPPORT ACTIVITIES WBS 3.03.3.10 - (EARECKSON AIR STATION)

This item covers costs associated with supporting the Government's effort on the facilities rather than construction costs. These costs include providing vehicles, computers, computer support system, and a Government construction office at the construction sites.

PLANNING WBS 3.03.3.11 – (EARECKSON AIR STATION)

This WBS item encompasses all activities performed in advance to organize the construction effort, including, but not limited to, notifications such as to the office of Federal Contract Compliance Programs; finalizing the work breakdown structure and the WBS dictionary; establishing and implementing the EVMS; validating long-lead procurement actions; supporting USACE's permit actions; finalizing the Integrated Master Plan and the Integrated Master Schedule; establishing the site office; initiating long-lead procurement actions; and purchasing hardware and software for the integrated computer system.

COMMISSIONING WBS 3.03.1.12 – (EARECKSON AIR STATION)

This item covers the execution, as required, of the preliminary pre-functional checklists and functional performance tests.



AWARD FEE WBS 3.03.3.13 - (EARECKSON AIR STATION)

PASS-THROUGH COST WBS 3.03.3.14 - (EARECKSON AIR STATION)

This item covers all construction equipment, spare parts, utilities, temporary facilities and consumables. Similarly, all contractor travel and costs associated with the movement, storage, and sale of personal effects, household goods, and vehicles, as allowed by the FAR 31.205-35, are included. General and administrative expenses in accordance with the disclosed cost accounting practices are included. Fee is not applicable to costs in this WBS item.